

## ABSTRACT

A method for detecting electrical faulty conditions in a plurality of power devices of a propulsion system is provided. The plurality of power devices is connectable in parallel circuit through a direct current (DC) link to an external DC power source. The method provides a first sequence of actions for determining an electrical short condition in at least one of the power devices upon the power source being connected. The method further provides a second sequence of actions for determining an electrical open condition in a respective one of the plurality of power devices during the occurrence of high current events.

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